UNITED STATES PATENT AND TRADEMARK OFFICE

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NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER
REYES, MARIELA D

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 February 2010*.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-16* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

The following is in response to the amendment filed on February 22, 2010.

Claims 1-16 are pending; claim 17 has been cancelled. Applicant's arguments have

been carefully and respectfully considered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ng

et al (US Patent 6,360,223) in view of Bernstein et al (US PG Pub 2003/0120651) and

Somerville et al (US PG Pub 2005/0203861).

With respect to independent claim 1:

Ng teaches:

A method of generating a computer readable data file representative of a

mapping or partial mapping between a first and a second representation of a set

of concepts and associated attributes, the method comprising the steps of:

Controlling a video display unit (user interface) **to display said first and**

second representations, or portions thereof, a to a user; (Column 3 Lines 11-14

and Fig. 7, discloses a user interface that displays data model representations)

Detecting input by the user of a signal specifying a value of one or more concepts or attributes <u>or</u> specifying a link (mapping rules) **between two or more concepts or attributes from the first and second representations;** (Column 3 Lines 15-21, discloses a user being able to define mapping rules)

Controlling the visual display unit to display to the user indications of the calculated logical implications of the specified values and links; (Column 3 Lines 15-21, discloses displaying to the user the results of a mapping)

Ng does not appear to explicitly disclose:

Calculating the logical implications of such specified values or links, wherein in response to the input by the user, all the underlying attributes of each of the pair of terms selected by the user are mapped to one another automatically; generating a computer readable data file representative of said mapping or partial mapping which includes both values and/or links specified by said user and the logical implications thereof calculated in the calculating step.

Bernstein teaches:

Calculating the logical implications (similarity coefficient) **of such specified values or links;** (Paragraph [046], discloses calculating similarity coefficients based on the selected mapping rule) **generating a computer readable data file representative of said mapping or partial mapping which includes both values and/or links specified by said user and the logical implications thereof calculated in the calculating step.** (Paragraph [064], discloses creating a mapping between two models based on the relationship and similarity coefficient)

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of the cited references to implement **calculating the logical implications of such specified values or links; generating a computer readable data file representative of said mapping or partial mapping which includes both values and/or links specified by said user and the logical implications thereof calculated in the calculating step** because calculating a similarity coefficient based on a plurality of techniques (Paragraph [026]) would make the mapping highly accurate.

The combination of Ng and Bernstein does not appear to explicitly disclose **wherein in response to the input by the user, all the underlying attributes of each of the pair of terms selected by the user are mapped to one another automatically.**

Somerville teaches **wherein in response to the input by the user, all the underlying attributes of each of the pair of terms** (packets) **selected by the user are mapped to one another automatically.** (Paragraph [217]-[219], discloses based on a user selection relating existing packets to new packets, wherein this relating includes attributes and keywords)

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of the cited references to implement **wherein in response to the input by the user, all the underlying attributes of each of the pair of terms selected by the user are mapped to one another automatically** because this would allow for information to be entered to a database in a more efficient manner.

With respect to claim 2:

Bernstein teaches:

Storing a plurality of program modules each of which performs one or more logical implication calculations, and wherein the step of calculating logical implications includes accessing and executing the stored program modules, whereby the method may be improved by adding new program modules.
(Paragraph [026], discloses calculating the similarity coefficient based on a plurality of techniques)

With respect to claim 3:

Bernstein teaches:

One of the logical implications calculated is whether the types of two attributes mapped together are the same <u>or</u> are convertible from one to another by an already stored conversion function <u>or</u> whether the user needs to supply a new suitable conversion function. (Paragraph [046], discloses that the similarity coefficient calculates the similarity between two objects that are the same)

With respect to claim 4:

Bernstein teaches:

One of the logical implications calculated is whether a new linkage of two attributes or concepts or a new assignment of a value to a concept or attribute is

logically inconsistent with any previously made linkages or assignments.

(Paragraph [060], discloses pruning the relationships based on the similarity coefficient)

With respect to claim 5:

Ng teaches:

Determining which concepts and attributes are not linked to other concepts or attributes and are not assigned to a fixed value and marking these as requiring user attention. (Column 4 Lines 58-63, discloses a user being able to manage the attributes of fields requiring clarification)

With respect to claim 6:

Ng teaches:

Marking the mapping as complete once all concepts or attributes are detected as being either linked to other concepts or attributes or as being assigned to a fixed value or as having been assigned to an unmapped status by the user. (Column 4 Lines 58-63)

With respect to claim 7:

Ng teaches:

Controlling the visual display unit to display to the user indications of the automatically formed links. (Column 3 Lines 15-21, discloses displaying to the user the results of a mapping)

Bernstein teaches:

Comparing underlying attributes or sub-attributes of the linked concepts or attributes to one another in conjunction with associated mapping rules, the comparison including comparing the types of the underlying attributes or sub-attributes; (Paragraph [059]—[060], discloses comparing subtrees nodes to determine the similarity coefficient)

Automatically forming a link to the underlying attributes or sub-attributes determined to match according to the comparison step. (Paragraph [064], discloses forming mappings using the subtree nodes and the calculated similarity coefficient)

With respect to claim 8:

Bernstein teaches:

The comparison step attempts to find a match between the names of the underlying attributes or sub-attributes in conjunction with mapping rules stored in association with each respective parent concept or attribute. (Paragraph [026], discloses comparing names)

With respect to claim 9:

Bernstein teaches:

If a match between the names of a pair of underlying attributes or sub-attributes is found, the comparison step further checks the types of the matched

underlying attributes or sub-attributes and if the types are the same or of there is

an appropriately associated conversion function available then it is determined

that there is also a type match, but otherwise it is determined that there is a type-

mismatch. (Paragraph [057]-[058], discloses checking and comparing subtree nodes to

generate the similarity coefficient)

With respect to claim 10:

Bernstein teaches:

If a match between the names of a pair of underlying attributes or sub-

attributes is found, the comparison further checks for consistency with previous

mappings between concepts, attributes and sub-attributes and designates the

linkage as either consistent or inconsistence in dependence on the result.

(Paragraph [064])

With respect to claim 11:

Bernstein teaches:

If an automatically formed link is found to be consistent but to have a type

mismatch, the linkage is automatically made but the display is caused to generate

an indication that there is a mismatch. (Paragraph [054], discloses finding

relationships and using the similarity coefficient to approve them)

With respect to claim 12:

Bernstein teaches:

If a link is found to be inconsistent it is not made. (Paragraph[064], discloses

pruning the nodes for inconsistencies)

With respect to independent claim 13:

Ng teaches:

Apparatus for (the language "for generating" is considered intended use)

generating a computer readable data file representative of a mapping or partial

mapping between a first and a second representation of a set of concepts and

associated attributes, the apparatus comprising:

A display driver for controlling (the language "for controlling" is considered

intended use) **a video display unit** (user interface) **to display said first and second**

representations, or portions thereof, to a user; (Column 3 Lines 11-14 and Fig. 7,

discloses a user interface that displays data model representations)

An input interface for detecting (the language "for detecting" is considered

intended use) **input by the user of a signal specifying a value to be assigned to**

one or more concepts or attributes or specifying a link (mapping rules) **between**

two or more concepts or attributes from the first and second representations;

(Column 3 Lines 15-21, discloses a user being able to define mapping rules)

Said display driver is additionally operable to (the language "operable to" is

considered intended use) **control the visual display unit to display to the user**

indication of the calculated logical implications of the specified values and links.
(Column 3 Lines 15-21, discloses displaying to the user the results of a mapping)

Ng does not appear to explicitly disclose:

A processor for (the language "for calculating" is considered intended use) **calculating the logical implications of such specified values or links, wherein in response to the input by the user, all the underlying attributes of each of the pair of terms selected by the user are mapped to one another automatically, and for generating** (the language "for generating" is considered intended use) **a computer readable data file representative of said mapping or partial mapping which includes both values and/or links specified by said user and the logical implications thereof calculated in the calculating step.**

Bernstein teaches:

A processor for calculating the logical implications (similarity coefficient) **of such specified values or links and** (Paragraph [046], discloses calculating similarity coefficients based on the selected mapping rule) **for generating a computer readable data file representative of said mapping or partial mapping which includes both values and/or links specified by said user and the logical implications thereof calculated in the calculating step.** (Paragraph [064], discloses creating a mapping between two models based on the relationship and similarity coefficient)

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of the cited references to implement **a processor for calculating the logical implications of such specified values or links; and for**

generating a computer readable data file representative of said mapping or partial mapping which includes both values and/or links specified by said user and the logical implications thereof calculated in the calculating step because calculating a similarity coefficient based on a plurality of techniques (Paragraph [026]) would make the mapping highly accurate.

The combination of Ng and Bernstein does not appear to explicitly disclose **wherein in response to the input by the user, all the underlying attributes of each of the pair of terms selected by the user are mapped to one another automatically.**

Somerville teaches **wherein in response to the input by the user, all the underlying attributes of each of the pair of terms** (packets) **selected by the user are mapped to one another automatically.** (Paragraph [217]-[219], discloses based on a user selection relating existing packets to new packets, wherein this relating includes attributes and keywords)

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of the cited references to implement **wherein in response to the input by the user, all the underlying attributes of each of the pair of terms selected by the user are mapped to one another automatically** because this would allow for information to be entered to a database in a more efficient manner.

With respect to claim 14:

Ng teaches:

Controlling the visual display unit to display to the user indications of the automatically formed links. (Column 3 Lines 15-21, discloses displaying to the user the results of a mapping)

Bernstein teaches:

Comparing underlying attributes or sub-attributes of the linked concepts or attributes to one another in conjunction with associated mapping rules, the comparison including comparing the types of the underlying attributes or sub-attributes; (Paragraph [059]—[060], discloses comparing subtrees nodes to determine the similarity coefficient)

Automatically forming a link to the underlying attributes or sub-attributes determined to match according to the comparison step. (Paragraph [064], discloses forming mappings using the subtree nodes and the calculated similarity coefficient)

With respect to claim 15:

Bernstein teaches:

An electronic data store for storing the mapping or partial mapping generated by said processor. (Paragraph [064])

With respect to claim 16:

A computer program or programs arranged such that while it or they are

executed on a computer it or they cause the computer to carry out the method of

claim 1. (See claim 1 rejection)

Response to Arguments

The following is in response to the arguments filed on February 22, 2010.

Claim Rejections - 35 USC § 103

Applicant's arguments have been carefully and respectfully considered but are

moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Mariela D. Reyes whose telephone number is (571)

270-1006. The examiner can normally be reached on M - F 7:30- 5:00 East time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John R. Cottingham/
Supervisory Patent Examiner, Art
Unit 2167

/Mariela D Reyes/
Examiner, Art Unit 2167
May 11, 2010